

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

- 1 1. (currently amended) A method for manufacturing thin film devices,
2 comprising ~~the steps of~~:
3 irradiating white light onto ~~an optically transparent film formed on the surface of~~
4 ~~an area of~~ a thin film device ~~having an optically transparent film thereon, during polishing in a~~
5 ~~process for polishing said optically transparent film;~~
6 detecting ~~the reflected light from prescribed regions of the reflected light~~
7 ~~generated by said area of~~ said thin film device due to the irradiation of said white light;
8 correcting the spectral waveform of said reflected light which is distorted by
9 ~~slurry used during polishing; and~~
10 determining the thickness of said optically transparent film ~~on said area at said~~
11 ~~prescribed regions, by using the information from the spectral waveform of the reflected light~~
12 ~~from the prescribed regions thus detected.~~

- 1 2. (currently amended) The method for manufacturing thin film devices
2 according to claim 1[[]], wherein said ~~prescribed regions~~ ~~areas~~ are determined on the basis of
3 previously measured information for the film thickness distribution of thin film devices
4 ~~processed~~ ~~created~~ by the same process as said thin device.

- 1 3. (currently amended) A method for manufacturing thin film devices,
2 comprising ~~the steps of~~:
3 irradiating white light onto an optically transparent film formed on ~~the surface~~ ~~an~~
4 ~~area of~~ a thin film device, ~~in a process for polishing said optically transparent film during a~~
5 ~~polishing process;~~
6 detecting ~~the reflected light generated by~~ ~~from~~ ~~said area of~~ said thin film device
7 due to the irradiation of said white light;

8 setting regions for measuring the film thickness using information ~~for relating to a~~
9 characteristic quantity of ~~the a~~ spectral waveform of ~~the said~~ reflected light generated by said
10 thin film device;

11 correcting the spectral waveform of said reflected light which is distorted by
12 slurry used during the polishing process;

13 determining the thickness of said optically transparent film at said ~~[[set]]~~ regions,
14 ~~from by using~~ information ~~[[for]]~~ ~~from the corrected~~ spectral waveform of the reflected light in
15 the regions thus set; and

16 monitoring said polishing process by using the information for the thickness of
17 the optically transparent film thus determined.

1 4. (currently amended) The method for manufacturing thin film devices
2 according to claim 3, wherein said regions for measuring film thickness are determined using
3 information such as ~~said spectral waveform of said reflected light, or the reflectivity of the~~
4 ~~surface of said sample with respect to said white light, or the frequency spectrum in said spectral~~
5 ~~waveform, or the like.~~

1 5. (currently amended) A method for manufacturing thin film devices,
2 comprising ~~the steps of:~~

3 irradiating white light onto an optically transparent film formed on the surface of
4 a thin film device, ~~in a process for polishing said optically transparent film~~ during a polishing
5 process;

6 detecting ~~the reflected light generated by~~ from said thin film device due to the
7 irradiation of said white light, ~~by time division;~~

8 setting prescribed regions for determining the film thickness ~~from a characteristic~~
9 ~~quantity of the spectral waveform of the reflected light thus detected by time division;~~

10 correcting the spectral waveform of said reflected light which is distorted by
11 slurry used during the polishing process;

12 determining the thickness of said optically transparent film on the basis of the
13 corrected spectral waveform of the said reflected light from the prescribed regions thus set; and

14 monitoring said polishing process by using the information for the thickness of
15 the optically transparent film thus determined.

1 6. (currently amended) The method for manufacturing thin film devices
2 according to claim 5, wherein a plurality of prescribed regions for determining said film
3 thickness are set, the film thickness at each of the plurality of regions thus set is determined,
4 information relating to the film thickness distribution on said thin film device is obtained, and the
5 said polishing process is monitored using the information relating to the film thickness
6 distribution thus obtained.

1 7. (currently amended) A method for manufacturing thin film devices;
2 comprising ~~the steps of~~:

3 irradiating white light onto an optically transparent film formed on ~~the surface~~
4 ~~prescribed regions of a thin film device, in a process for~~ ~~during~~ polishing ~~said optically~~
5 ~~transparent film;~~

6 detecting ~~the reflected light generated by~~ ~~from~~ said thin film device due to the
7 irradiation of said white light;

8 ~~detecting the reflected light generated by said thin film device, by time division;~~
9 ~~correcting the spectral waveform of said reflected light which is distorted by~~
10 ~~slurry used during the polishing process;~~

11 determining the thickness of said optically transparent film ~~on the basis~~ ~~by using~~
12 ~~information relating to~~ ~~of the~~ ~~said~~ ~~corrected~~ spectral waveform of the reflected light ~~at~~ ~~from~~ ~~said~~
13 ~~prescribed positions based on a characteristic quantity of the respective spectral waveforms~~
14 ~~detected by time division;~~ and

15 monitoring said polishing process by using the information for the thickness of
16 the optically transparent film thus determined.

1 8. (currently amended) The method for manufacturing thin film devices
2 according to claim 7, wherein the ~~characteristic quantity~~information relating to of said spectral
3 waveform is ~~either the reflection intensity or the frequency spectrum intensity~~ of said spectral
4 waveform.

1 9. (new) The method for manufacturing thin film devices according to claim
2 7, wherein the information relating to said spectral waveform is the frequency spectrum intensity
3 of said spectral waveform.

1 10. (new) The method for manufacturing thin film devices according to
2 claim 3, wherein said regions for measuring film thickness are determined using the reflectivity
3 of said area of said thin film device with respect to said white light.

11. (new) The method for manufacturing thin film devices according to
claim 3, wherein said regions for measuring film thickness are determined using the frequency
spectrum of said spectral waveform of said reflected light.

Amendments to the Drawings:

The attached sheets of drawings includes changes to Fig. 7, 9, 11, and 17. These drawings replace the prior versions of the drawings.

In Fig. 7, duplicated reference numerals have been canceled from the figure.

In Fig. 9, reference numerals 91-95 were changed to 84-88 to avoid duplication of reference numerals 91-95 originally used in Fig. 2.

In Fig. 11, reference numerals 91-93 were changed to 97-99 to avoid duplication of reference numerals 91-93 originally used in Fig. 2.

In Fig. 17, the label "prior art" was added.

Attachment: Replacement Sheets (4)